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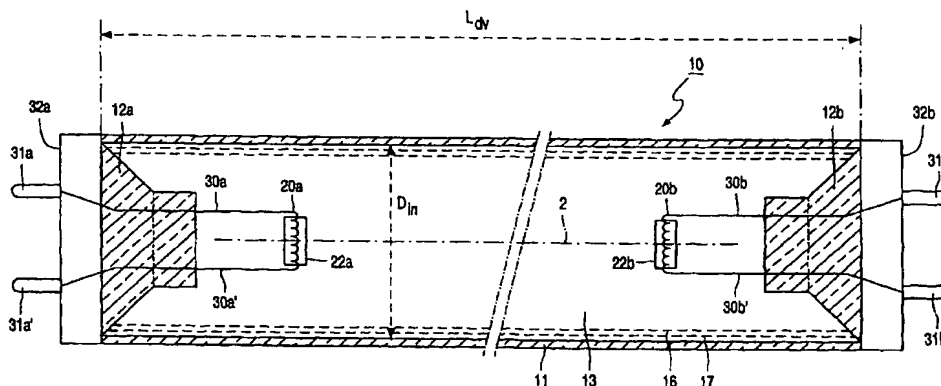
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(54) Title: **LOW-PRESSURE MERCURY VAPOUR DISCHARGE LAMP**



(57) Abstract: Low-pressure mercury vapor discharge lamp has an at least partly substantially cylindrical discharge vessel (10) with a length  $L_{dv}$  and with an internal diameter  $D_{in}$ . The discharge vessel (10) encloses, in a gastight manner, a discharge space (13) provided with an inert gas mixture and with mercury. The discharge vessel (10) comprises discharge means (electrodes 20a; 20b) for maintaining a discharge in the discharge space (13). According to the invention, the ratio of the weight of mercury  $m_{Hg}$  in the discharge vessel (10) to the product of the internal diameter  $D_{in}$  and the length of the discharge vessel  $L_{dv}$  is given by the relation: Formula (I), wherein  $C \leq m(F) \leq 0.01 \text{ g (m) g/mm}^2$ . Preferably,  $0.0005 \leq m(F) \leq 0.005 \text{ g (m) g/mm}^2$ . Preferably, the discharge vessel (10) contains less than 0.1 mg mercury. The discharge lamp according to the invention operates under unsaturated mercury conditions.



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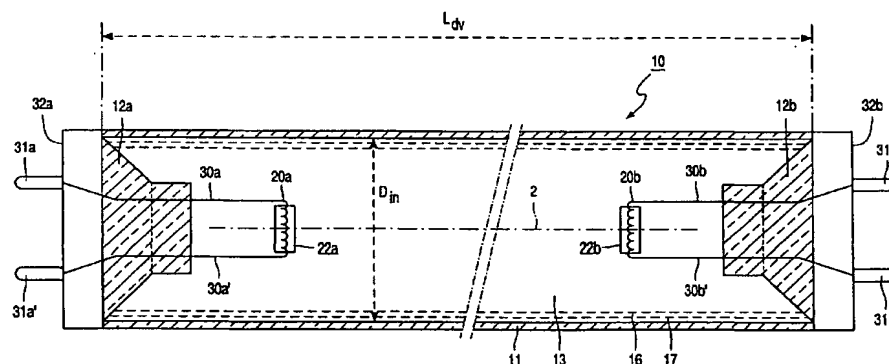
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$$\frac{m_{\text{Hg}}}{D_{\text{in}} \times L_{\text{dv}}} = C \quad (I)$$

(57) Abstract: Low-pressure mercury vapor discharge lamp has an at least partly substantially cylindrical discharge vessel (10) with a length  $L_{\text{dv}}$  and with an internal diameter  $D_{\text{in}}$ . The discharge vessel (10) encloses, in a gastight manner, a discharge space (13) provided with an inert gas mixture and with mercury. The discharge vessel (10) comprises discharge means (electrodes 20a; 20b) for maintaining a discharge in the discharge space (13). According to the invention, the ratio of the weight of mercury  $m_{\text{Hg}}$  in the discharge vessel (10) to the product of the internal diameter  $D_{\text{in}}$  and the length of the discharge vessel  $L_{\text{dv}}$  is given by the relation: Formula (I), wherein  $C \leq 0.01 \mu\text{g}/\text{mm}^2$ . Preferably,  $0.0005 \leq C \leq 0.005 \mu\text{g}/\text{mm}^2$ . Preferably, the discharge vessel (10) contains less than 0.1 mg mercury. The discharge lamp according to the invention operates under unsaturated mercury conditions.



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